Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

March 5, 2019

Re: *In the Matter of Transforming the 2.5 GHz Band*, WT Docket No. 18-120

Dear Ms. Dortch:

On September 24, 2018, Midcontinent Communications (Midco) met with the following individuals from the Wireless Telecommunications Bureau: Blaise Scinto, Dana Shaffer, Katherine Schroeder, Nancy Zaczek, Nadize Sodos-Wallace, John Schauble, Matthew Pearl, and Jonathan Campbell (collectively, "Wireless Bureau") regarding the above-referenced proceeding.[1] Midco also met with the wireless advisors for Chairman Pai, and Commissioners O'Rielly, Carr, and Rosenworcel.[2]

During the September 24 meeting, the Wireless Bureau asked for Midco's input on local priority filing windows for rural Tribal Nations. This letter clarifies our earlier comments, responds to the Wireless Bureau's inquiry on local priority filing windows, and otherwise provides technical information on the ability of the Educational Broadband Service (EBS) band to close the Digital Divide.

DISCUSSION

I. Regardless of the rationalization procedure used, the Commission should maximize the EBS white space available for auction to help close the Digital Divide

As explained in our initial and reply comments,[3] we can use the EBS or the 2.5 GHz band to help close the Digital Divide. Using our Midco Edge Out℠ strategy, we "edge out" high-speed internet from our almost 10,000 miles of fiber to more remote, rural areas using next generation,

[1] *See* Midco, Ex Parte Letter for meeting with Wireless Competition Bureau, WT Docket No 18-120 (Sept. 26, 2018).
[2] *See* Midco, Ex Parte Letter for meeting with Umair Javed, WT Docket No 18-120 (Sept. 26, 2018); Midco, Ex Parte Letter for Erin McGrath, WT Docket No 18-120, GN Docket No. 17-258, GN Docket No. 12-354 (Sept. 26, 2018); Midco, Ex Parte Letter for Rachel Bender, WT Docket No 18-120 (Oct. 1, 2018); Midco, Ex Parte Letter for Will Adams, WT Docket No 18-120 (Nov. 11, 2018).
[3] *See generally In the Matter of Transforming the 2.5 GHz Band*, Comments of Midco, WT Docket No. 18-120 (Aug. 8, 2018) ("Midco Initial Comments"); *In the Matter of Transforming the 2.5 GHz Band*, Reply Comments of Midco, WT Docket No. 18-120 (Sept. 7, 2018) ("Midco Reply Comments").

LTE fixed wireless technology.[4] The EBS band could further propel our network, and that of other providers, to close the Digital Divide due to its propagation characteristics and permissible power limits. Figure 1 shows the propagation abilities of the 2.5 GHz band in rural Thompson, ND; a single sector deployment at 200 feet would cover 443.04 square miles and a population of 3,863.[5] Figure 2 shows potential speeds and distances using the EBS band.

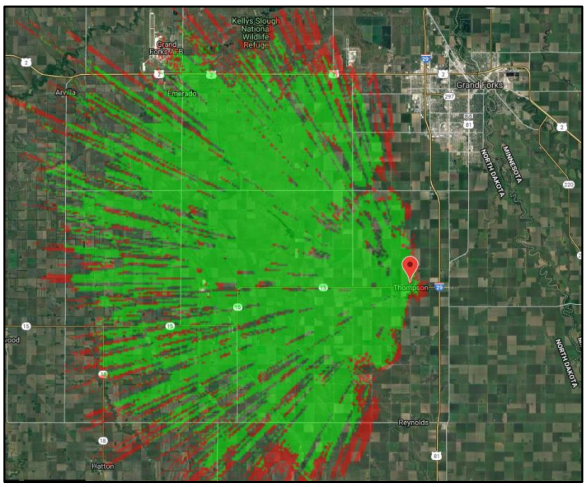

Figure 1: Example Propagation for the 2.5GHz Band from the West-Facing Sector in Thompson, ND

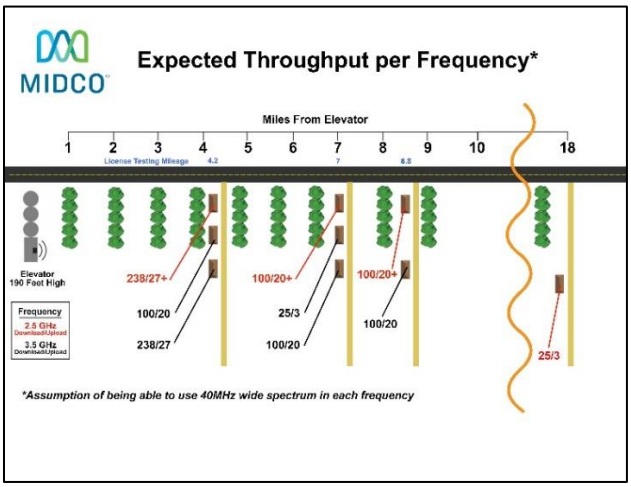

Figure 2: Potential Speeds and Distances for the 2.5 GHz Band from the West-Facing Sector in Thompson, ND

The extensive propagation coverage afforded from the EBS band will help offset the realities of serving rural America with broadband—including limited population density. Some proposals to the Commission, however, urge for even more of this valuable spectrum to be allotted to incumbents, ***for free***, even in unserved, rural areas.

The Commission requested input on how to rationalize the existing EBS licenses to free up spectrum for auction.[6] In our comments, we interpreted that request to limit EBS licenses, not expand them.[7] Given the commercial use of the band, we encouraged the Commission to rationalize existing EBS licenses based on geography using an 80% threshold percentage.[8] Other commentators proposed that the existing EBS boundary would be maintained, and the

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[4] For a further description of our Midco Edge Out[SM] strategy, see *In the Matter of Unlicensed Use of the 6 GHz Band*, Initial Comments of Midco, ET Docket No. 18-295, at p. 4 (Feb. 15, 2019) (explaining our Thompson, ND site as an example of the Midco Edge Out[SM] strategy).

[5] Figure 1 assumes no environmental or engineering constraints, such as down tilt or beam width control to best engineer our network. We may use down tilt or other engineering mechanisms to provide an optimal customer experience. Figure 1 was created using Tower Coverage software, assuming a 40dBm for the radio, and a 17dBi antenna gain, for a total EIRP 57, and a deployment height of 200 feet.

[6] *In the Matter of Transforming the 2.5 GHz Band*, Notice of Proposed Rulemaking (NPRM), WT Docket No. 18-120, at ¶¶ 9-18.

[7] Midco Initial Comments at p. 7-12.

[8] *Id.* at p. 10 ("To yield the greatest white space possible for auction, and thereby the most efficient spectrum use, the Commission should use an 80% threshold based on geography, regardless of whether rationalization is to the census tract or county level.")

rationalization procedure would increase these incumbents' spectrum holdings.[9] If the Commission decides to follow this approach, a high percentage for rationalization is even more important to limit a windfall of spectrum to mostly commercial incumbents. As shown in Figures 3 and 4,[10] using a rationalization of 10% based on geography versus 80% would drastically and unfairly increase the amount of spectrum for incumbents.

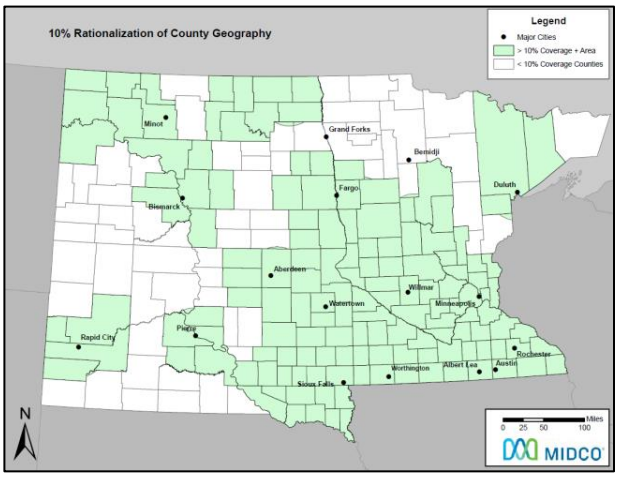


Figure 3: Rationalization for EBS Licenses if the License Covers 10% of the County's Geography

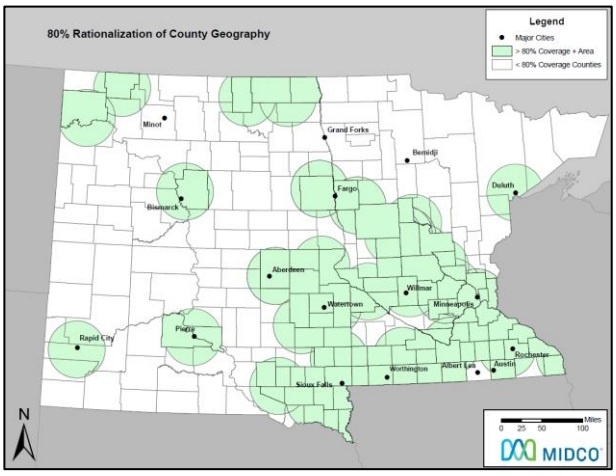


Figure 4: Rationalization for EBS Licenses if the License Covers 80% of the County's Geography

Currently, the EBS licenses in our footprint cover about 38.8% of all counties. Using a 10% coverage threshold would increase that county coverage to 60.8%. Figure 5 shows the graphic representation of the lost white space. A 10% rationalization would result in an unwarranted windfall to commercial entities who, due only to their ability to secure a lease in closed-door negotiations, will receive valuable mid-band spectrum ***for free***.

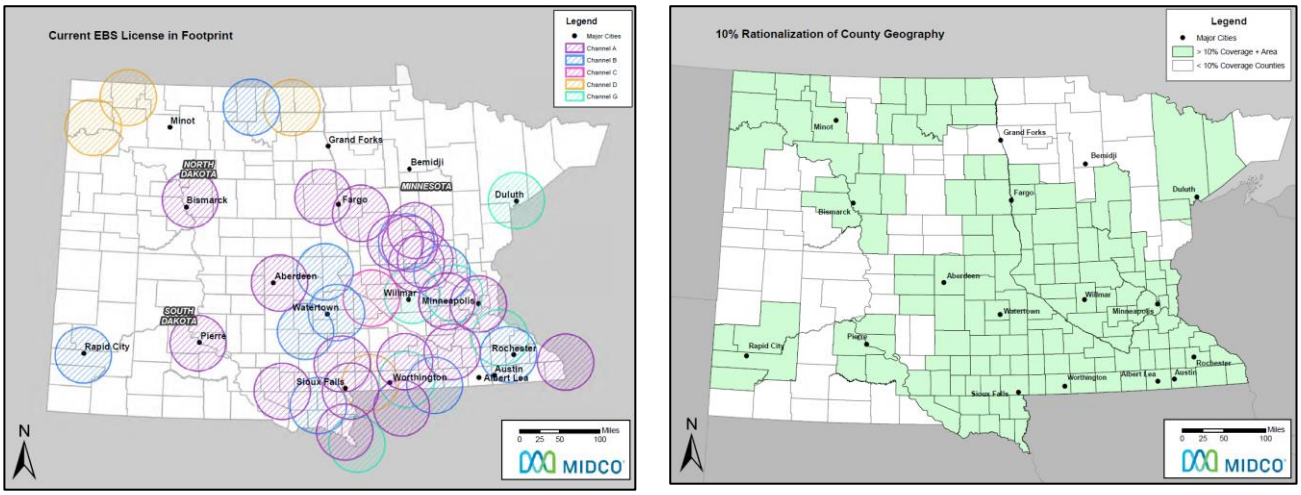


Figure 5: Comparison of EBS White Space between Status Quo and 10% Rationalization based on County Geography

[9] *See, e.g., In the Matter of Transforming the 2.5 GHz Band*, Comments of Sprint Corporation, WT Docket No. 18-120 at p. 5 (Aug. 8, 2018) (arguing for a 10% rationalization).
[10] Full-size copies of the maps used in Figures 3-6 are attached hereto.

An 80% rationalization threshold, however, would keep the status quo and limit the windfall to license-holders. An 80% rationalization threshold would cover 39.7% of counties in our footprint, compared to the 38.8% coverage currently. Figure 6 below provides a graphical representation of this difference.

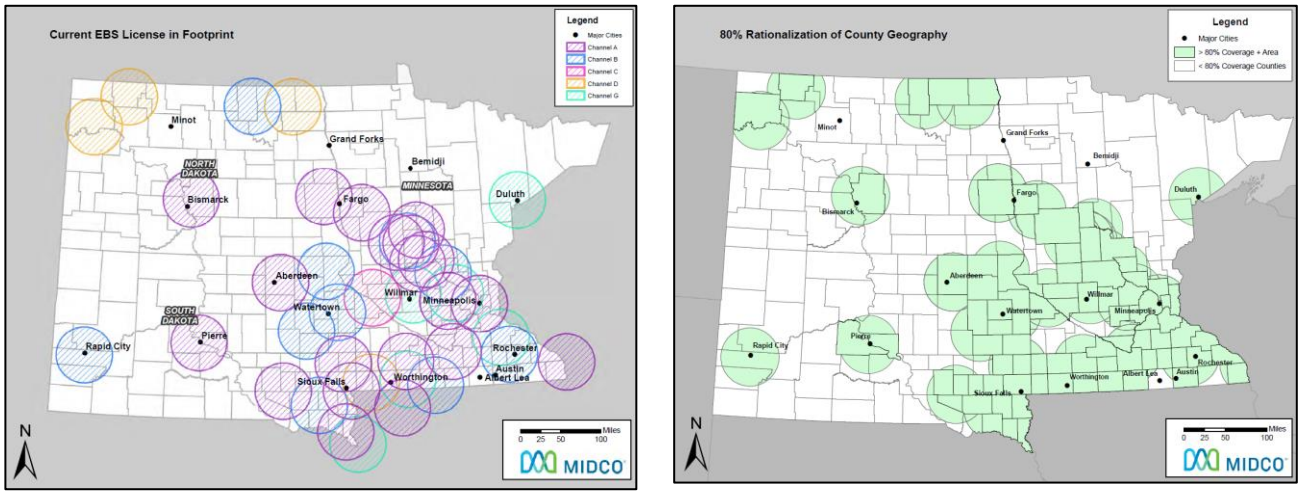


Figure 6: Comparison of EBS White Space between Status Quo and 80% Rationalization based on County Geography

If the Commission determines that it will rationalize incumbents to provide them with more spectrum if the incumbent covers a certain percentage of a county, the 80% of geography threshold is a fair threshold to employ.[11] Figures 5 and 6 show that an 10% rationalization instead of an 80% rationalization would result in a ***decrease of approximately 21.1% in available EBS white space*** in our footprint. An 80% rationalization, however, would free up more spectrum for auction, "put this band in the best position for future success,"[12] and avoid "past spectrum policy mistakes."[13]

II. The Commission should not implement *any* local priority filing windows, but could otherwise encourage broadband development in Tribal areas

The Commission asked for input on whether three tiers of local priority filing windows should be allowed prior to general commercial use of the 2.5 GHz band, namely: (1) existing licensees, (2) rural Tribal Nations, and (3) educational entities.[14] During our previous meeting

[11] Additionally, the Commission could also consider rationalizing current incumbents to census tracks, which could further limit the amount of additional spectrum being provided to incumbents. In our footprint, the counties and census tracks for rural areas where we would use the EBS band in deploying fixed wireless are somewhat similar. We anticipate, however, that the census tract v. county distinction could have a bigger impact in more urban areas or states where census tracts in rural areas are smaller than counties.

[12] *In the Matter of Transforming the 2.5 GHz Band,* Commissioner O'Rielly Statement (O'Rielly Statement), WT Docket No. 18-120 (May 10, 2018) ("Let's figure out what to do with the incumbents, auction the rest, and put this band in the best position for future success.").

[13] *See id.* at ¶ 3.

[14] *See generally* NRPM ¶¶ 26-48.

with the Wireless Bureau, the Bureau asked a more limited question on whether we support local priority windows for rural Tribal Nations only.

We urge the Commission not to adopt ***any*** local priority filing windows. As a policy matter, allowing some entities priority access to the EBS band over an open auction does not further any national policy objectives. The history of the EBS band itself demonstrates that spectrum should not be limited to one type of entity.[15] While the Commission originally allocated the EBS band for educational broadcasting, the band has since become overwhelmingly commercialized. Over 98% of EBS licenses in our footprint are associated with a commercial entity.[16] As a policy matter, therefore, we disagree with using any local priority filing windows.

As a practical matter, local priority windows for Tribal Nations could be problematic. As shown in Figure 7, Tribal areas, as compared to counties, can be irregularly shaped, and priority licenses could further complicate the geographic landscape of EBS white spaces. Figure 8 is a zoom in on the Lake Traverse Tribal area[17] near Watertown, SD. Figure 8 shows the complicated and irregular-shaped licenses and white spaces if a priority access license was awarded. Such irregularity makes engineering more difficult, creates less attractive white spaces for auction, and would not result in an efficient use of spectrum.[18]

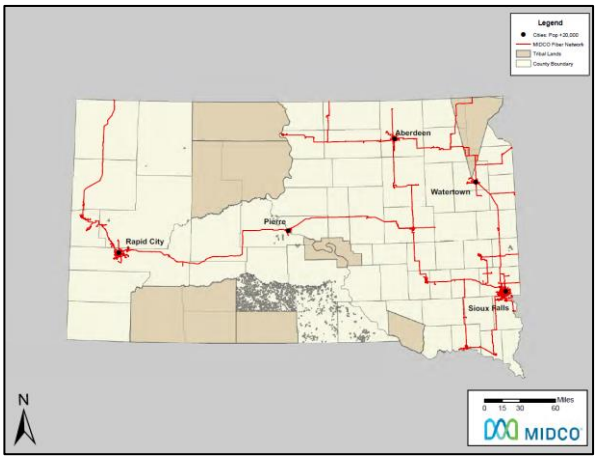


Figure 7: Tribal Areas in South Dakota

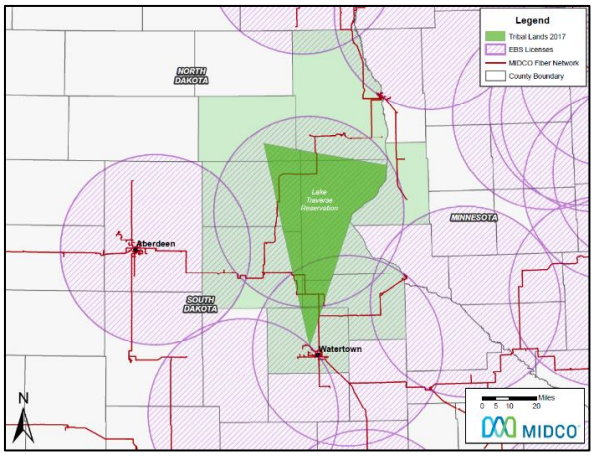


Figure 8: Lake Traverse Area with Overlapping EBS Licenses

[15] *O'Reilly Statement* ("I am troubled about the possibility of repeating past spectrum policy mistakes by creating new local priority filing windows for preferred entities. It is one thing to allow long-standing incumbents greater flexibility to put their spectrum to better use or participate in the secondary market, it is quite another to issue new licenses for free or on the cheap, which then–consistent with EBS tradition–could be immediately leased or flipped to commercial providers. Why would we enrich such middlemen? Why would we continue the EBS charade and would doing so even be consistent with the law?")

[16] *See* Midco Initial Comments at 7 (explaining the 98% commercialization of EBS licenses in our footprint).

[17] *See DeCoteau v. Dist. Cnty. Ct. for the Tenth Jud. Dist.*, 420 U.S. 425 (1975) (discussing the status of the Lake Traverse Tribal area).

[18] NPRM at ¶ 28 ("What effect might these priority windows have on the attractiveness of the remaining spectrum for other applicants?").

Local priority windows in which an entity receives valuable spectrum for free also undermines the Commission's incentive for creating buildout requirements[19] to ensure that entities actually use the EBS band. The entity would only give back spectrum which it received for free, unlike a commercial entity that would lose its spectrum and its financial investment.

We agree, however, with the Commission's assessment that "members of federally-recognized American Indian Tribes and Alaska Native Villages and other residents of Tribal lands have lacked meaningful access to wired and wireless communications services."[20] Instead of local priority windows, we encourage the Commission to provide financial incentives, such as robust bidding credits for an EBS white space auction, to encourage development in Tribal areas.[21] The Commission could further encourage buildout in Tribal areas through federal funding programs. Requiring participation of winning companies in the E-rate program, including in Tribal areas, would further ensure broadband coverage for eligible libraries and schools to help close the Homework Gap. Finally, the Commission could award any non-auctioned white spaces in Tribal areas to Tribal entities with buildout conditions and allow Tribal entities to either build out their areas or partner with commercial entities to do so.

CONCLUSION

We commend the Commission for taking action to make the most efficient use of the valuable EBS band, and believe that our suggestions could help close the Digital Divide.

Sincerely,

/s/ *Nicole Tupman*

Nicole Tupman
Assistant General Counsel
Email: nicole.tupman@midco.com

Enclosures

[19] *Id.* at ¶ 54.
[20] *Id.* at ¶ 35 (internal quotation omitted).
[21] *Id.* at ¶ 62 (seeking comment on potential preferential treatment of some applicants).

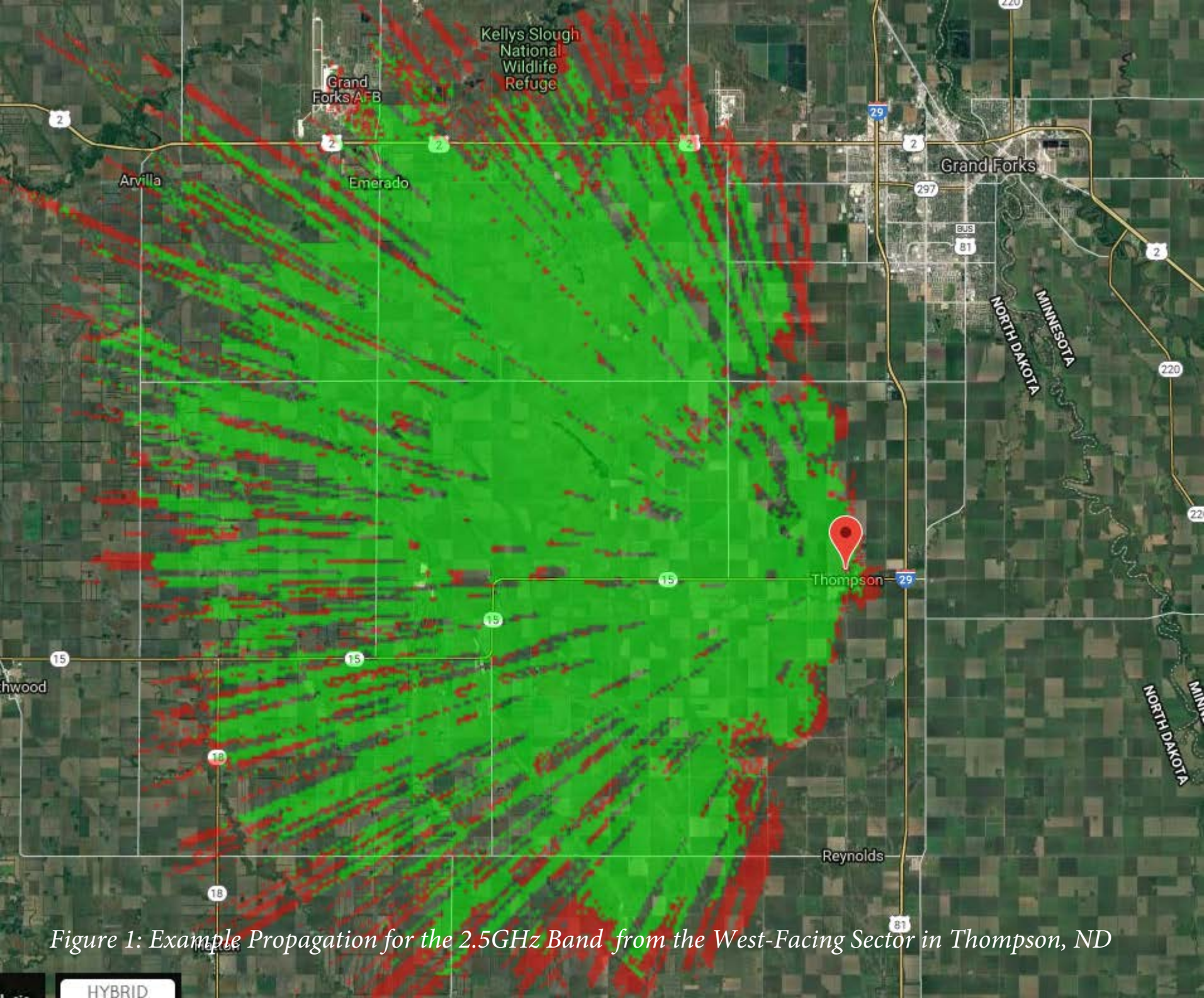
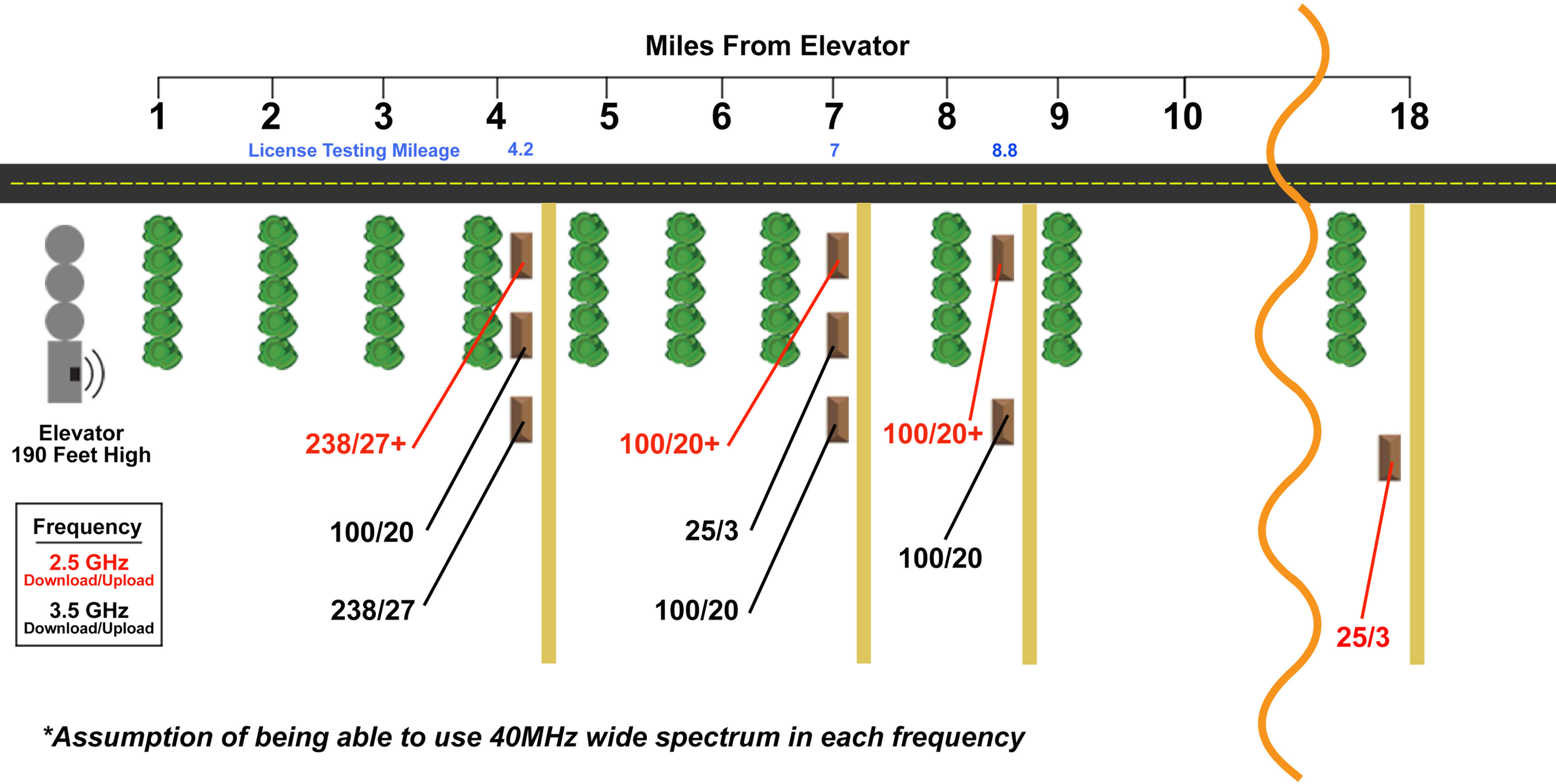


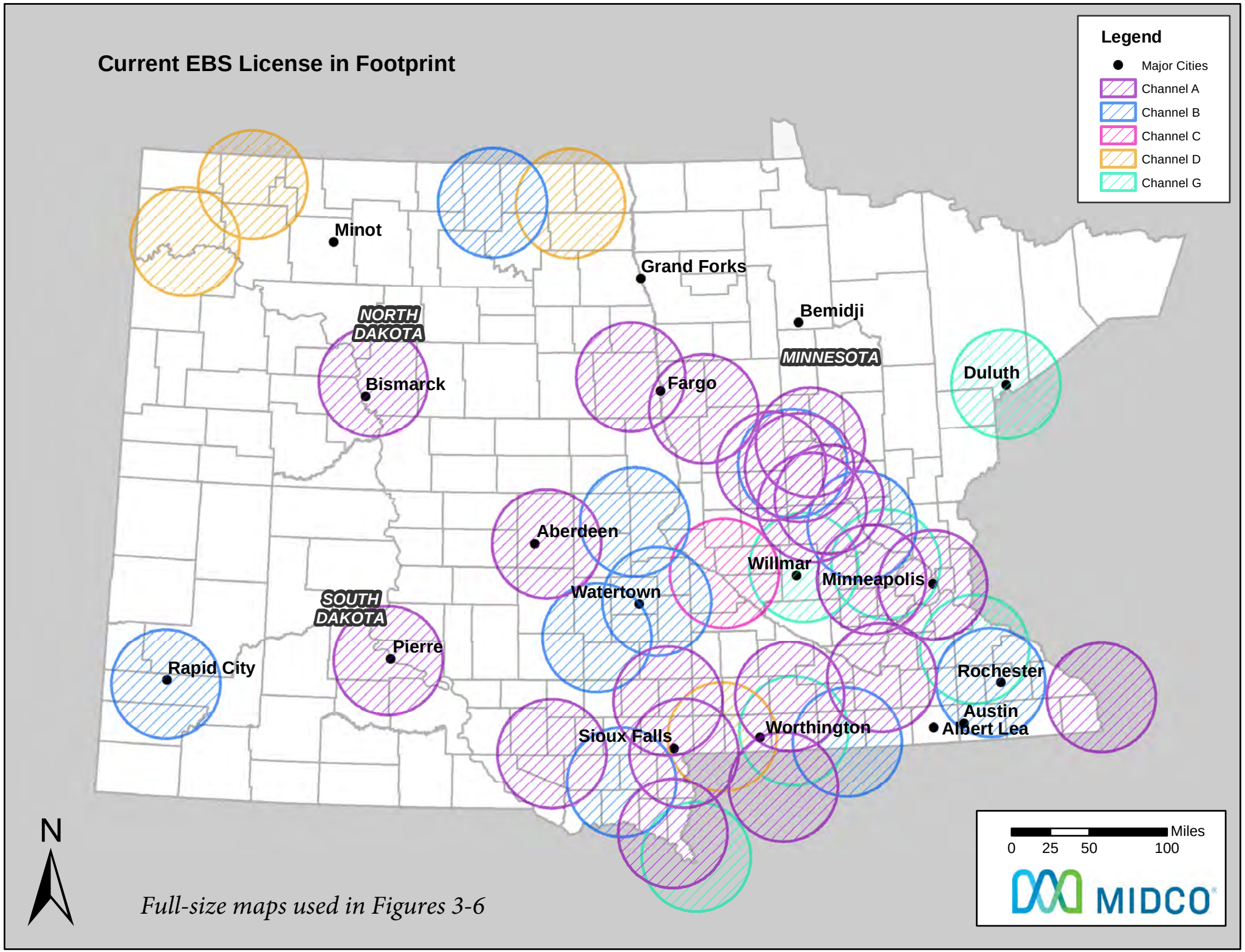
Figure 1: Example Propagation for the 2.5GHz Band from the West-Facing Sector in Thompson, ND

Expected Throughput per Frequency*

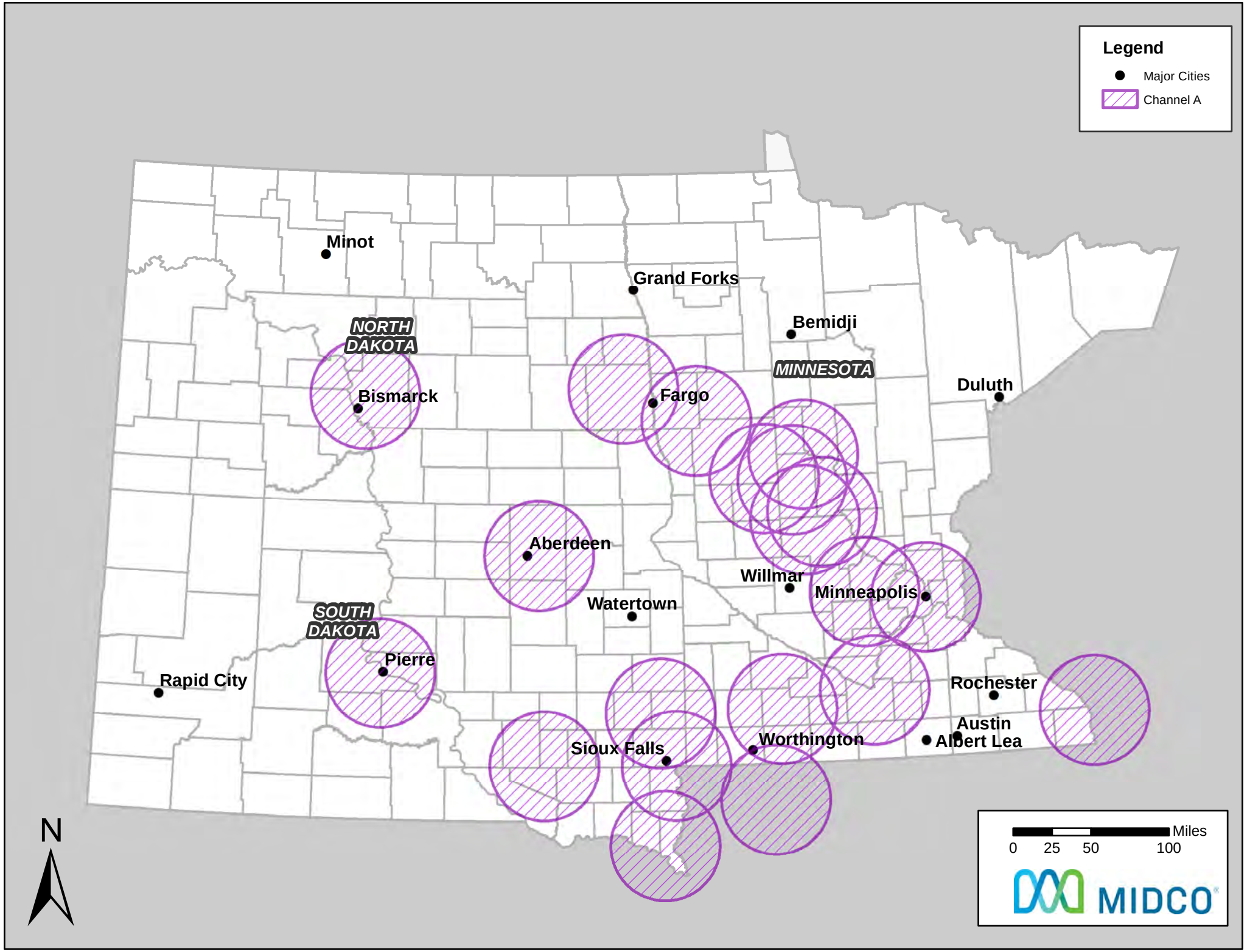


*Assumption of being able to use 40MHz wide spectrum in each frequency

Figure 2: Potential Speeds and Distances for the 2.5 GHz Band from the West-Facing Sector in Thompson, ND



Full-size maps used in Figures 3-6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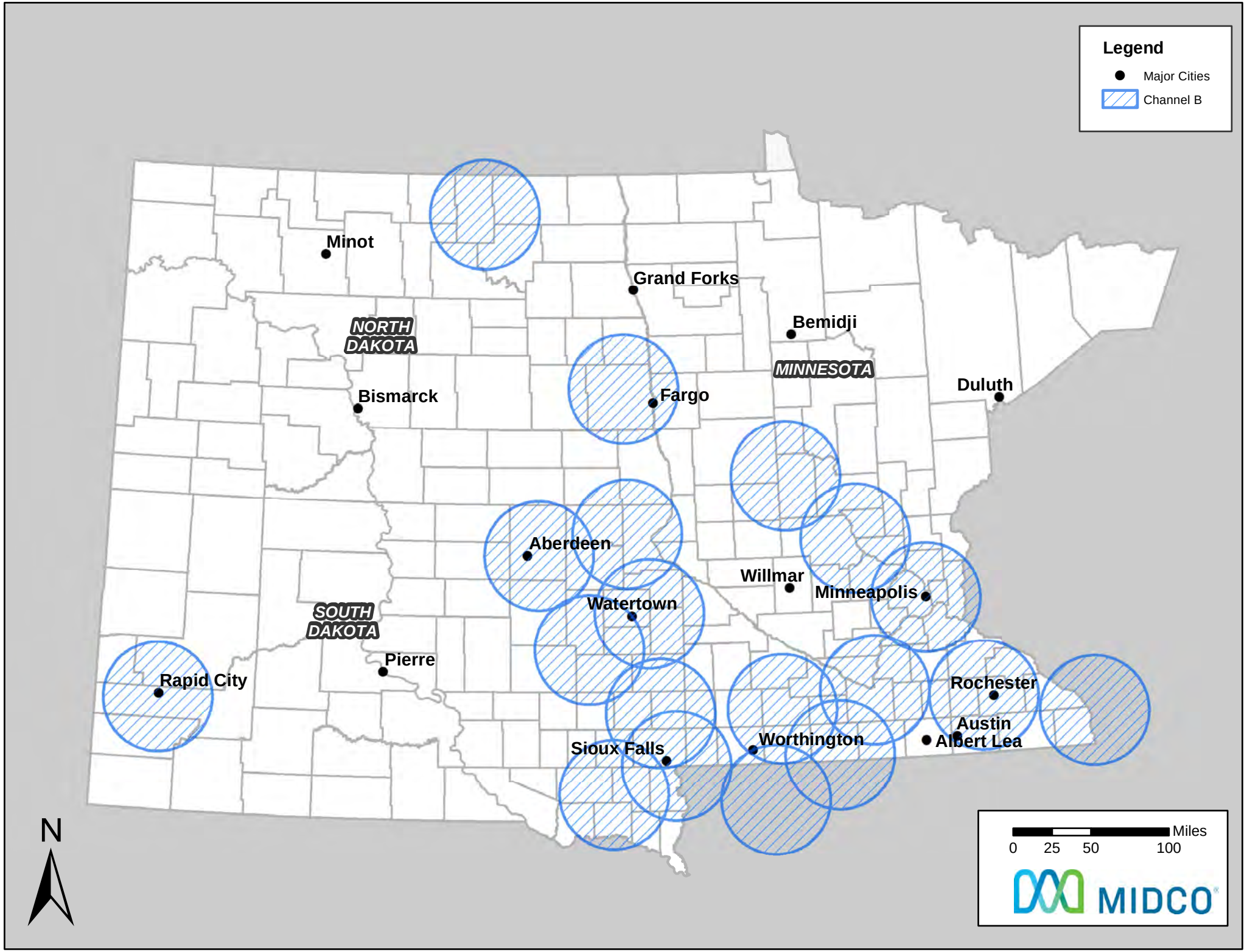
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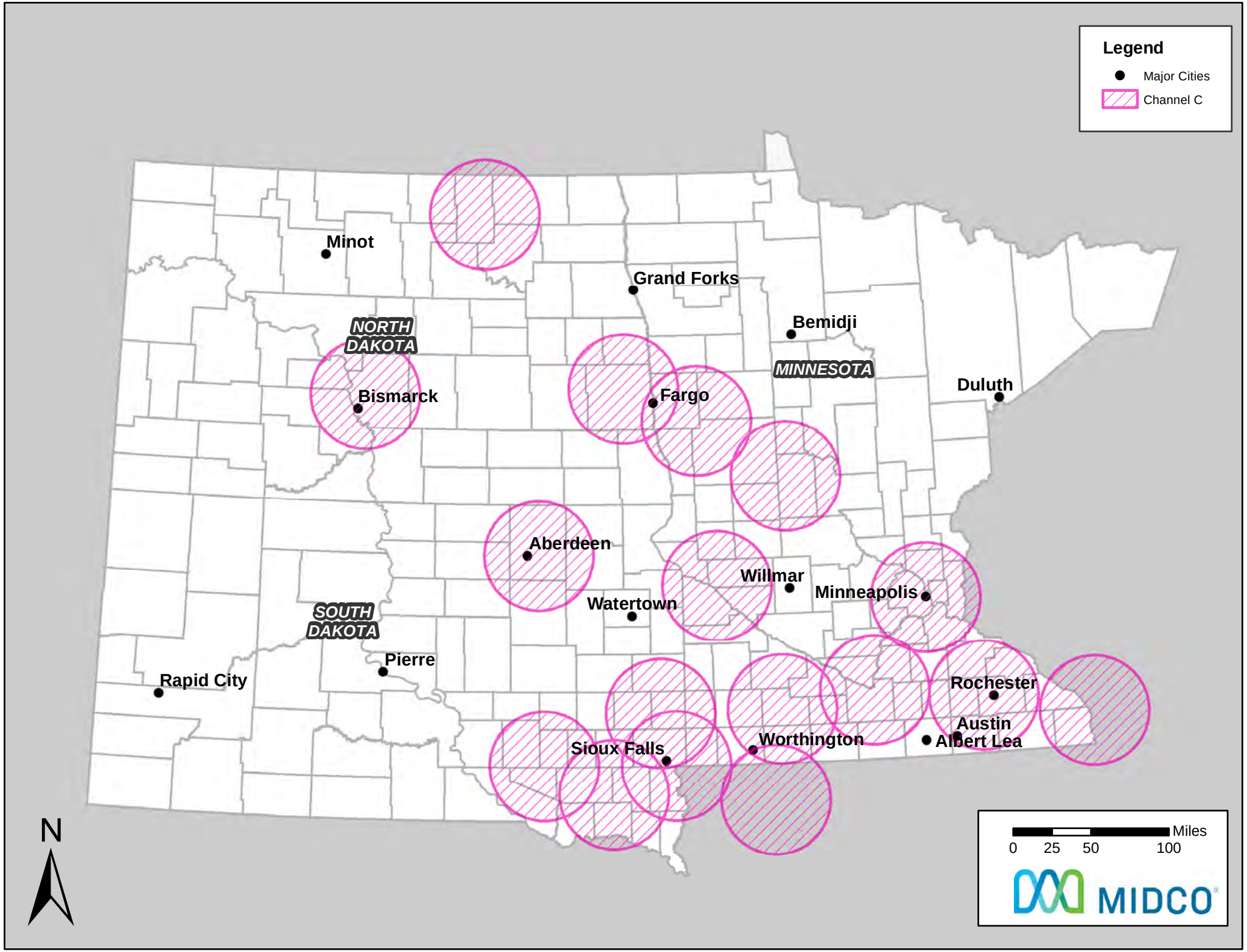
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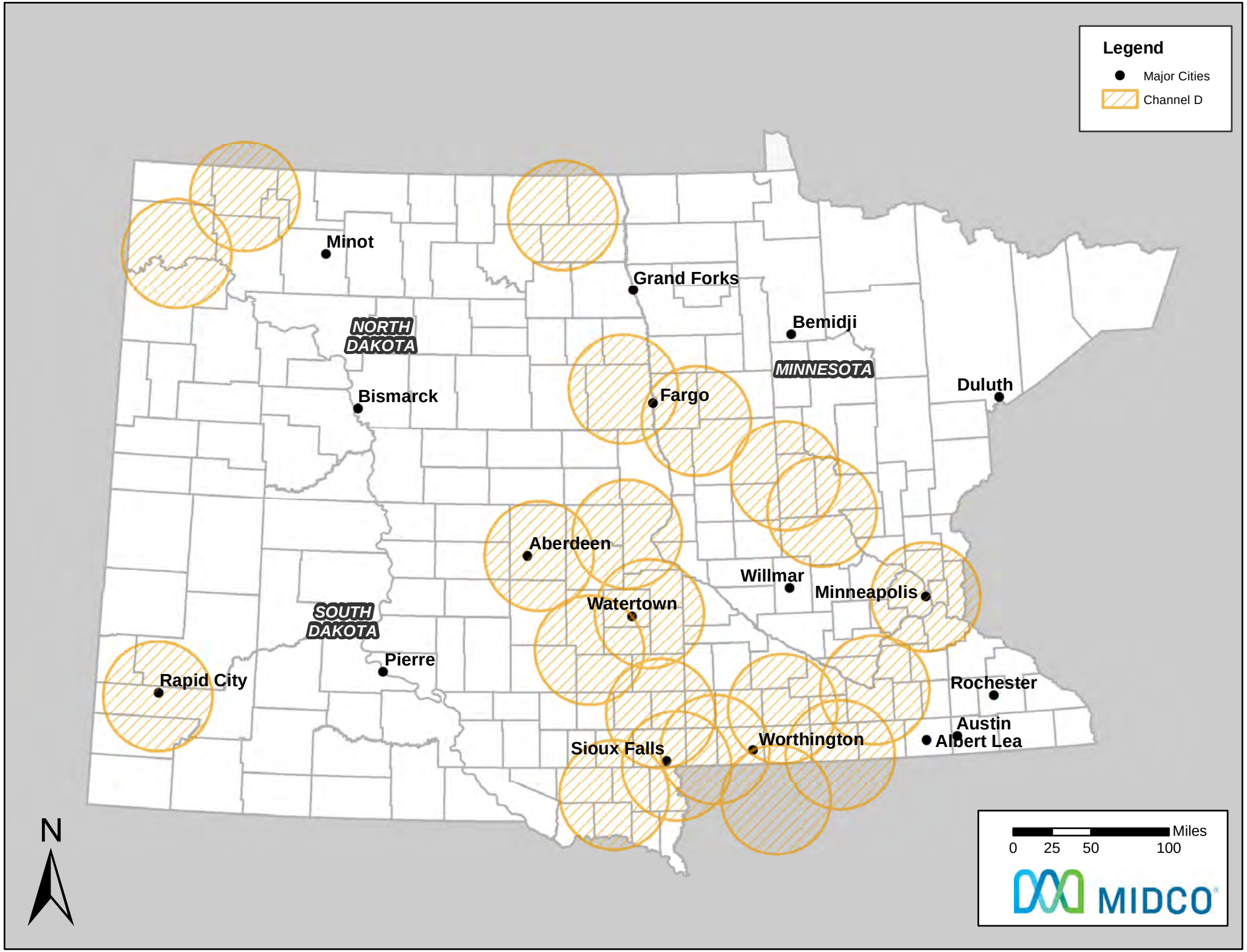
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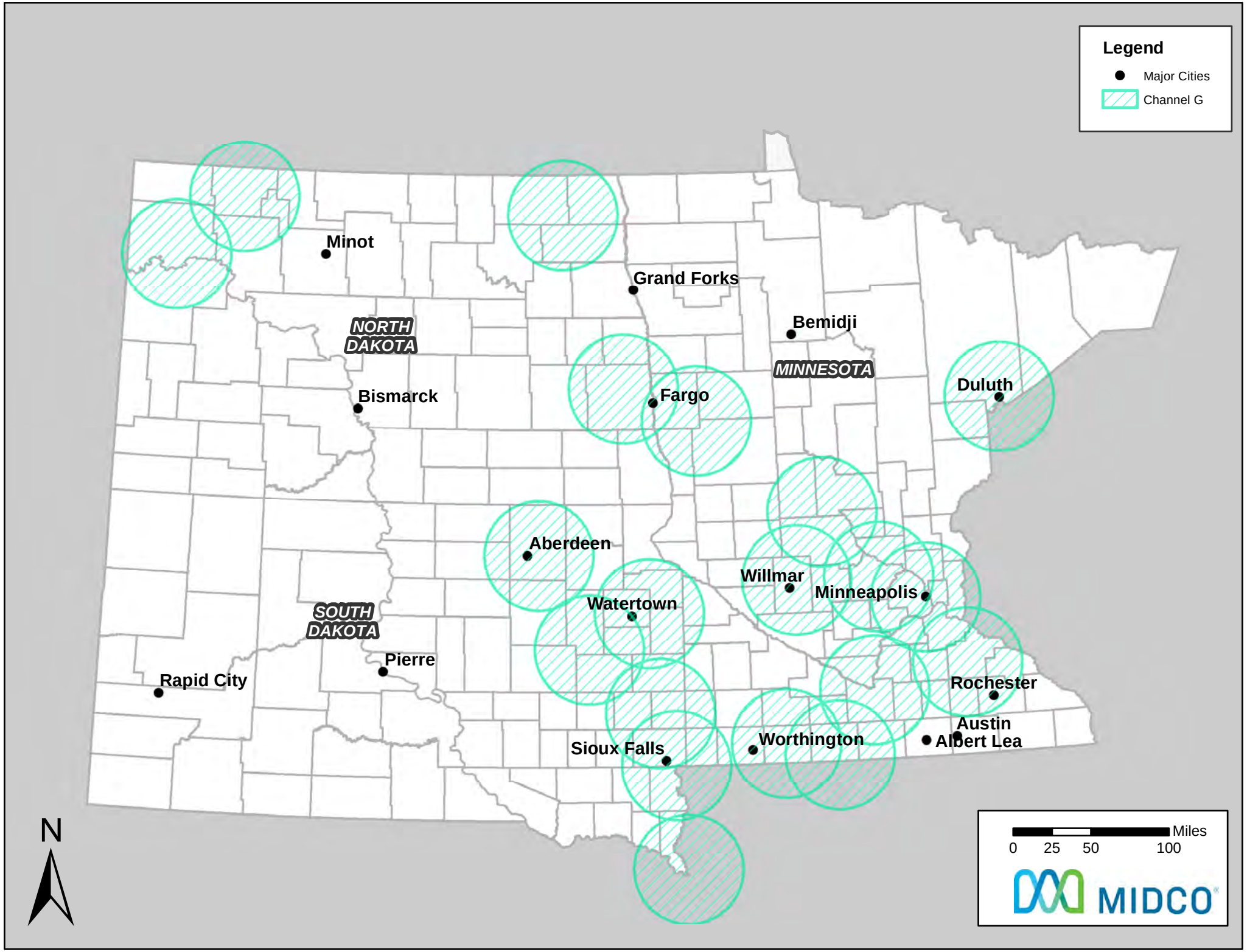
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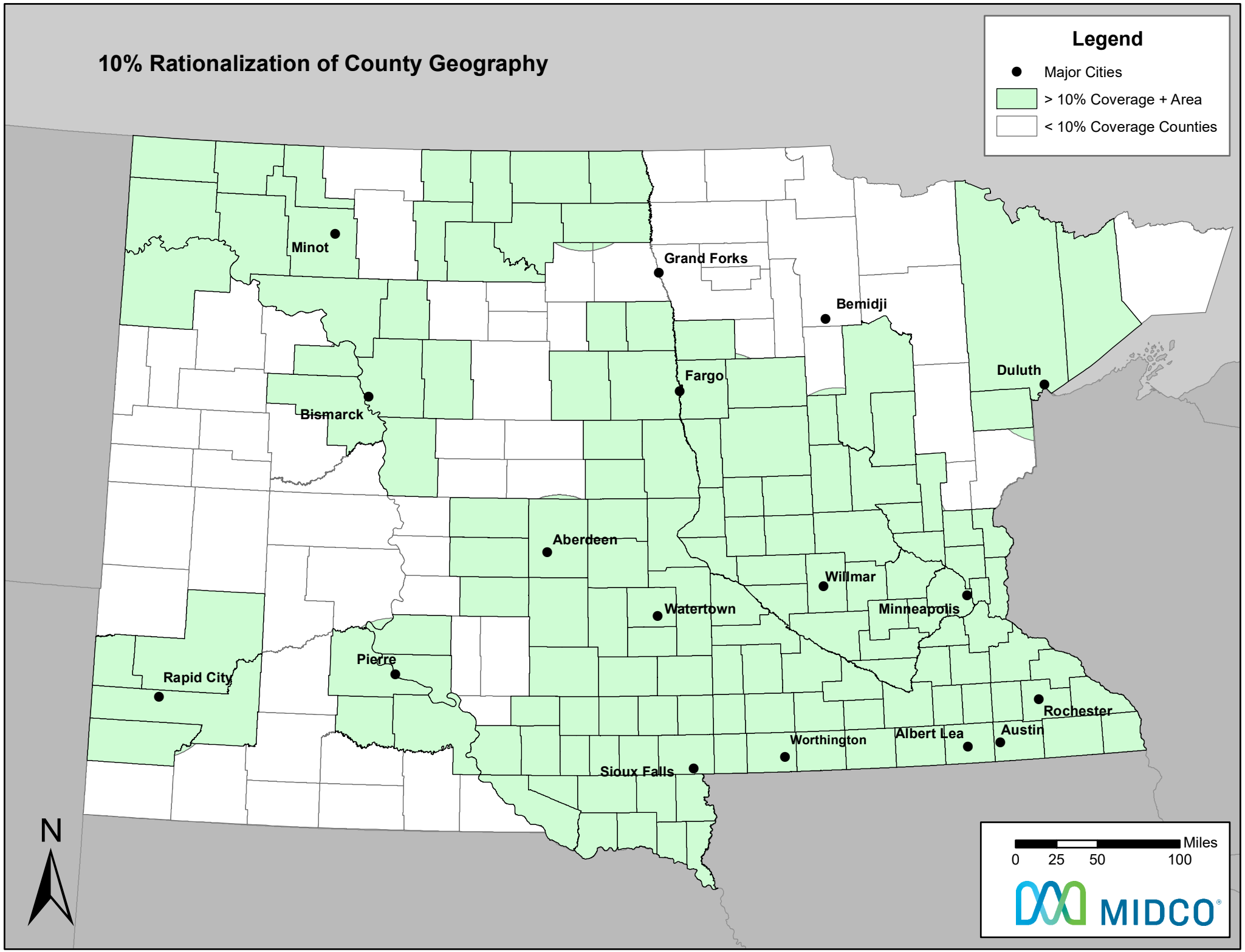
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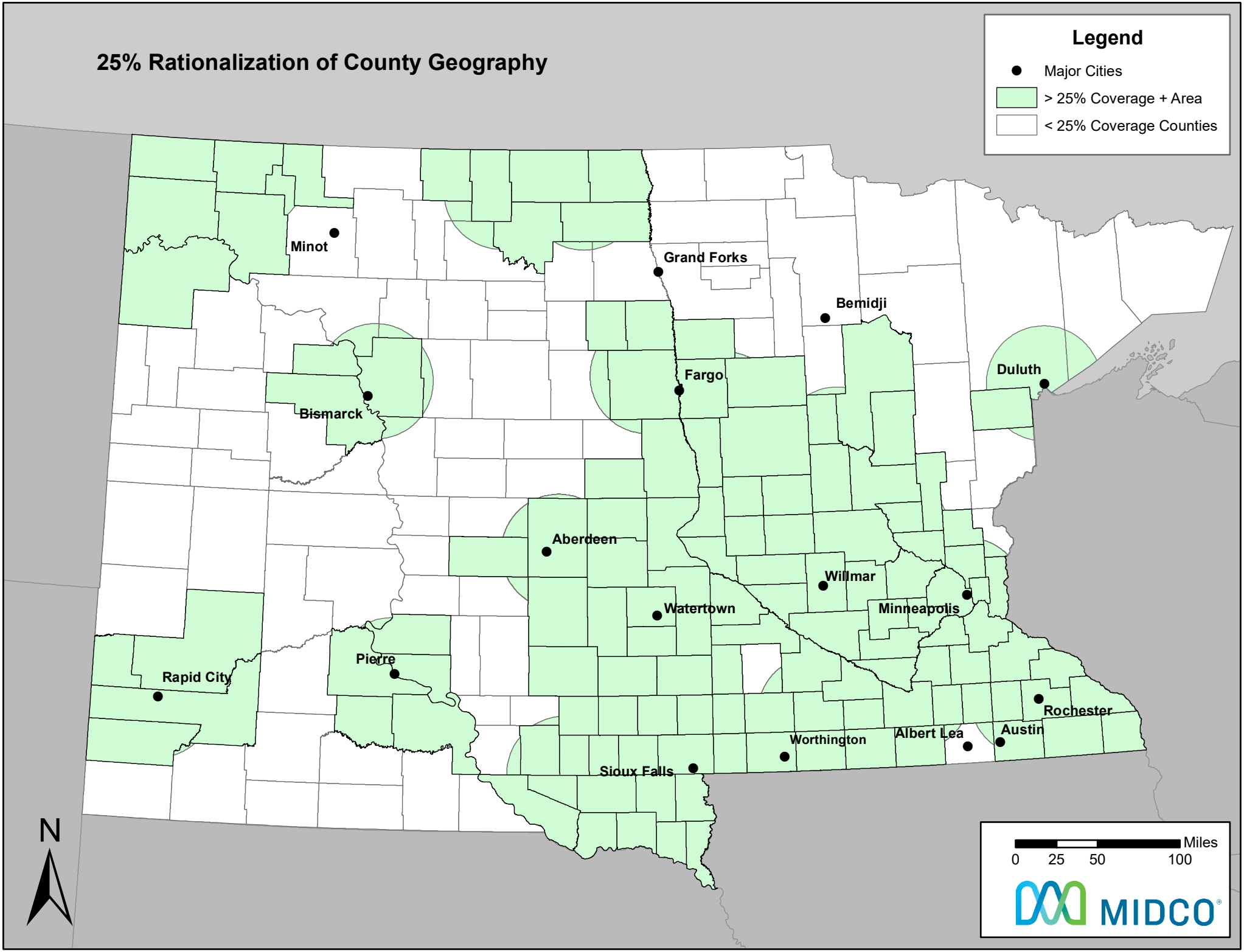
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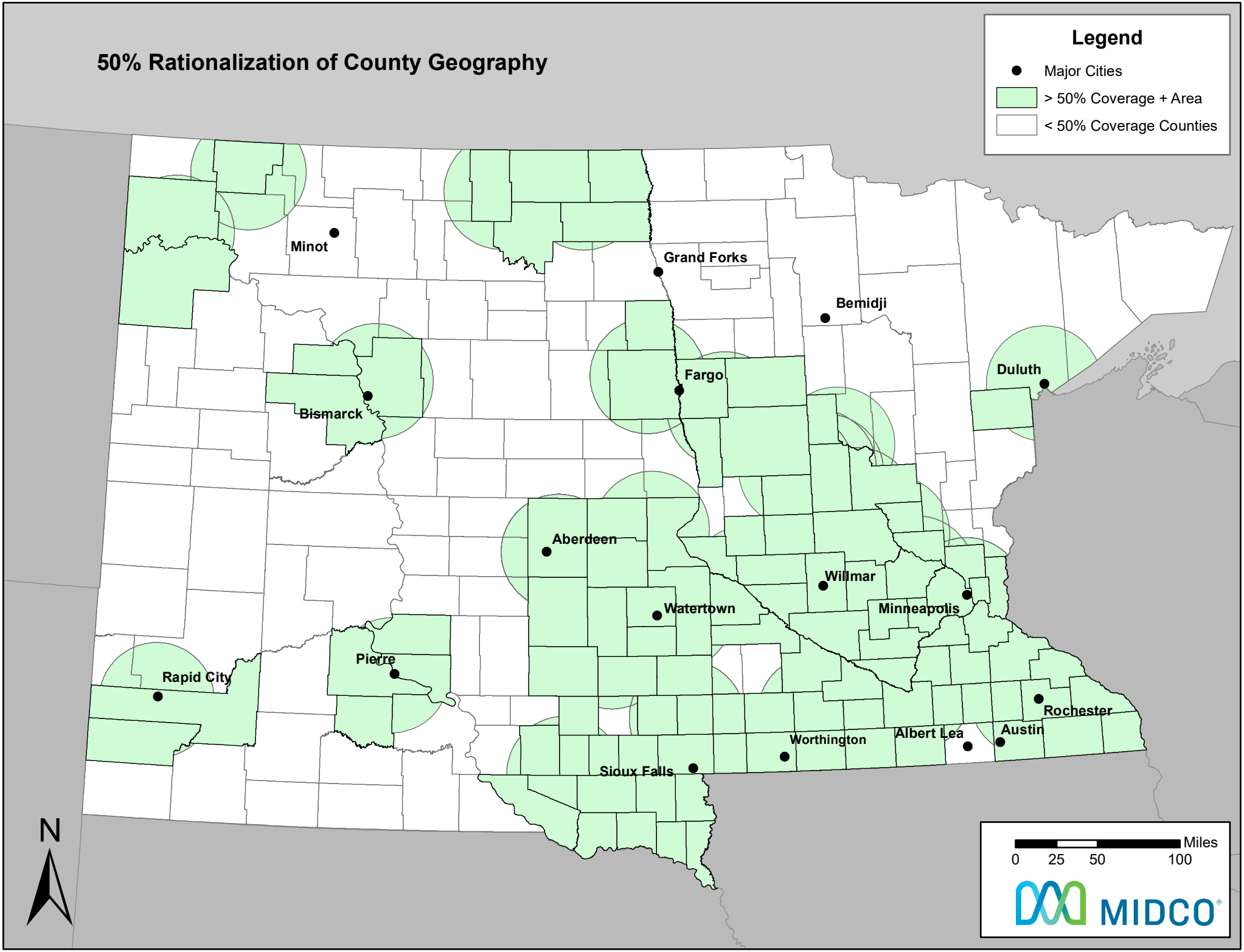
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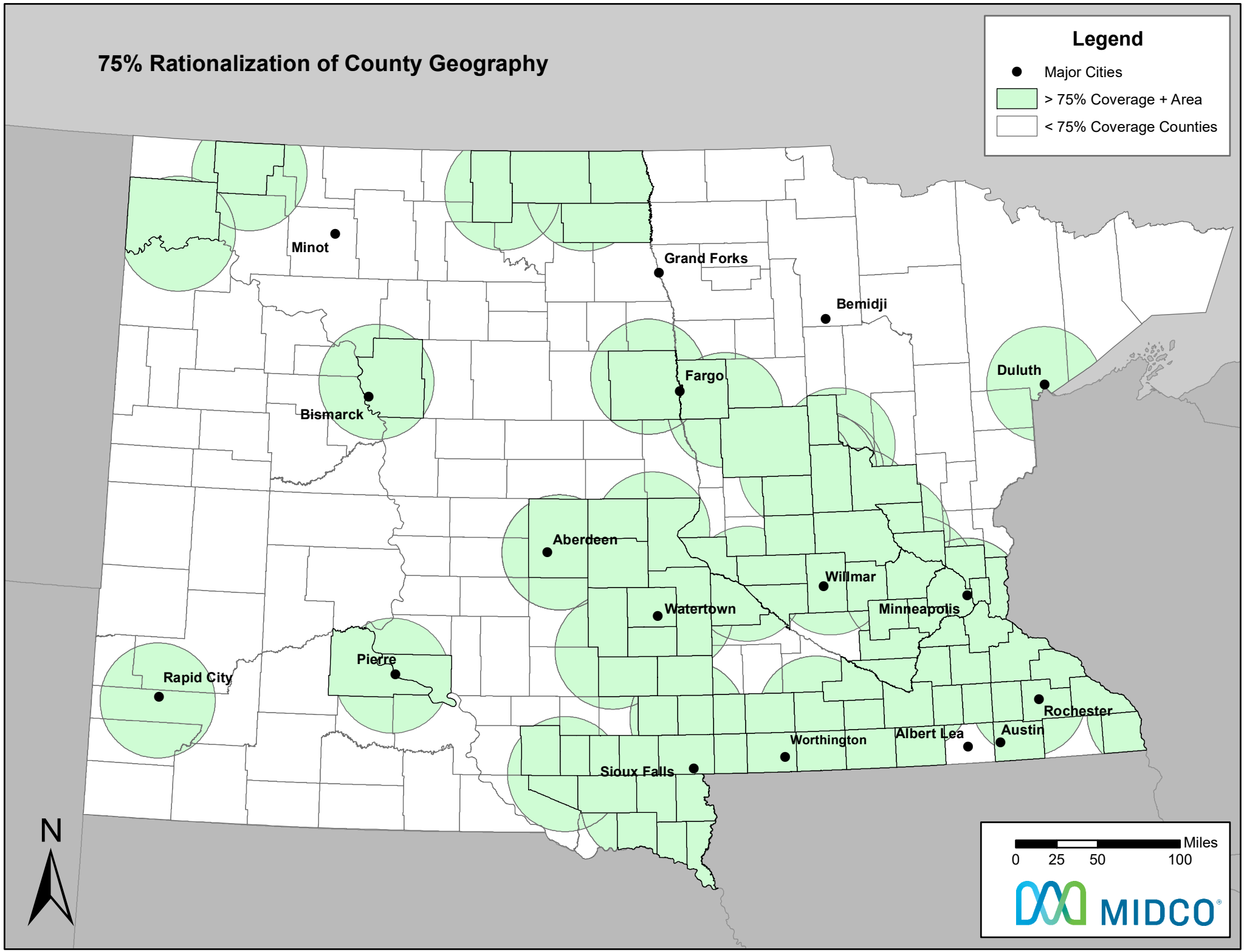

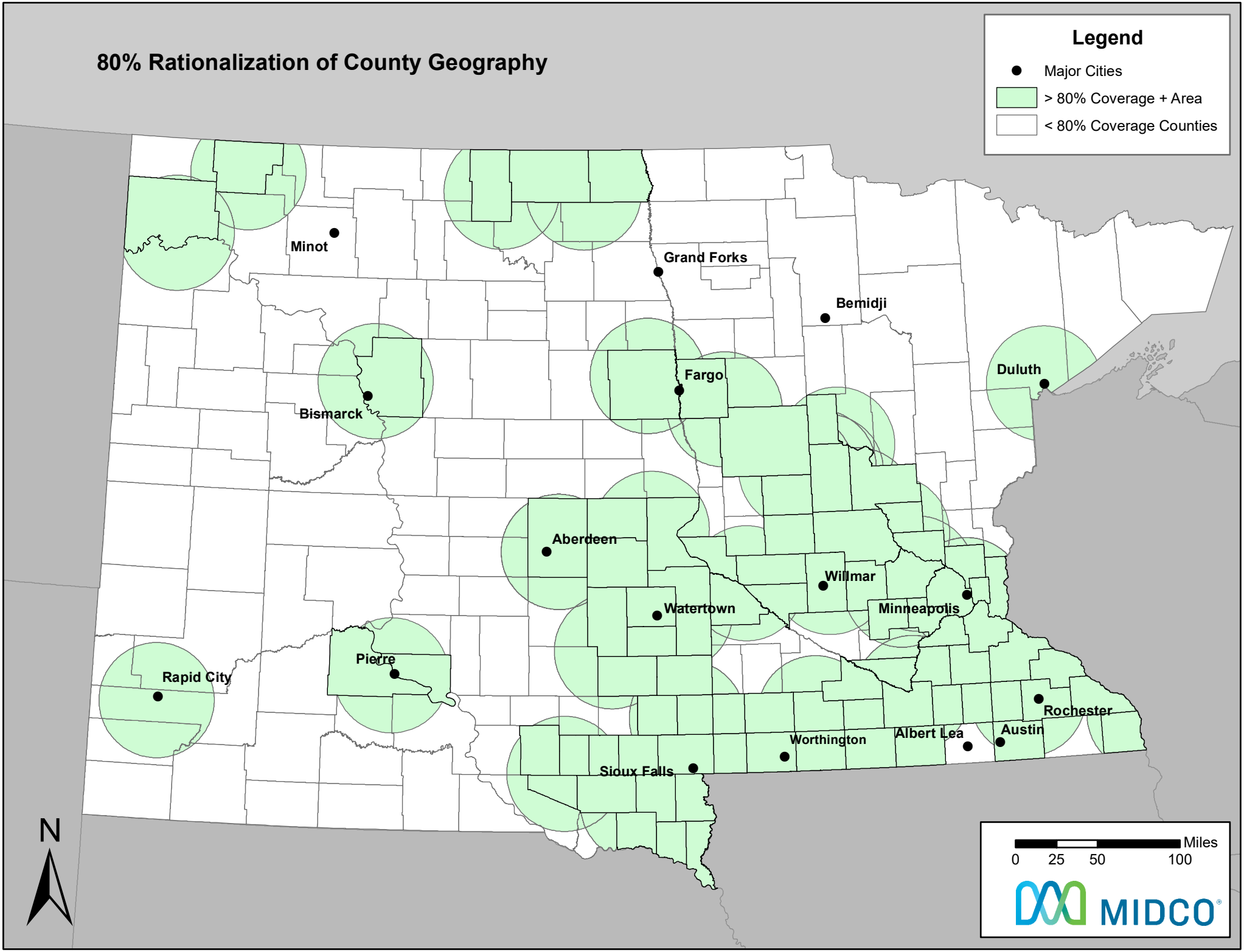
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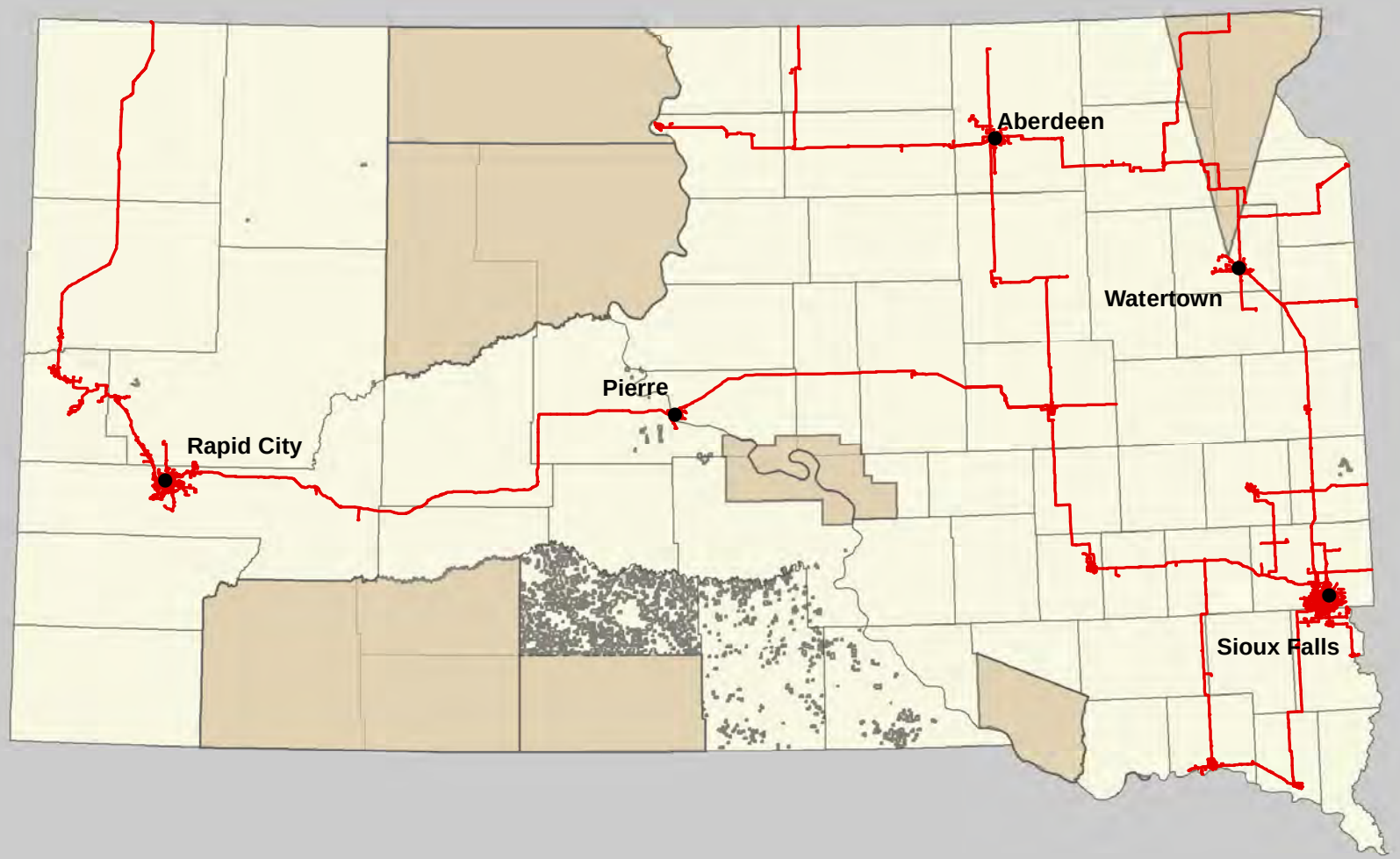
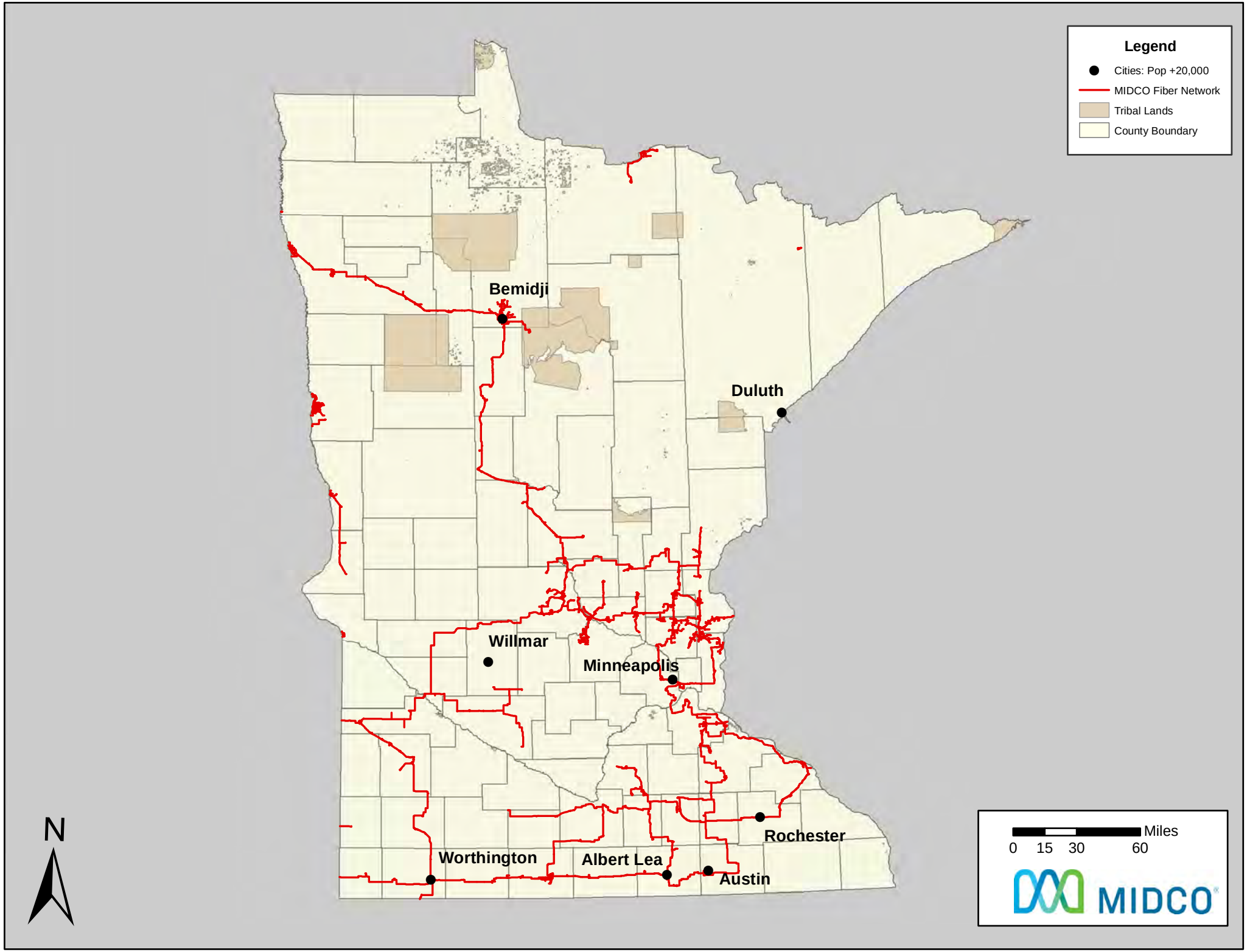


Figure 7: Tribal Areas in South Dakota (MN and ND are also provided)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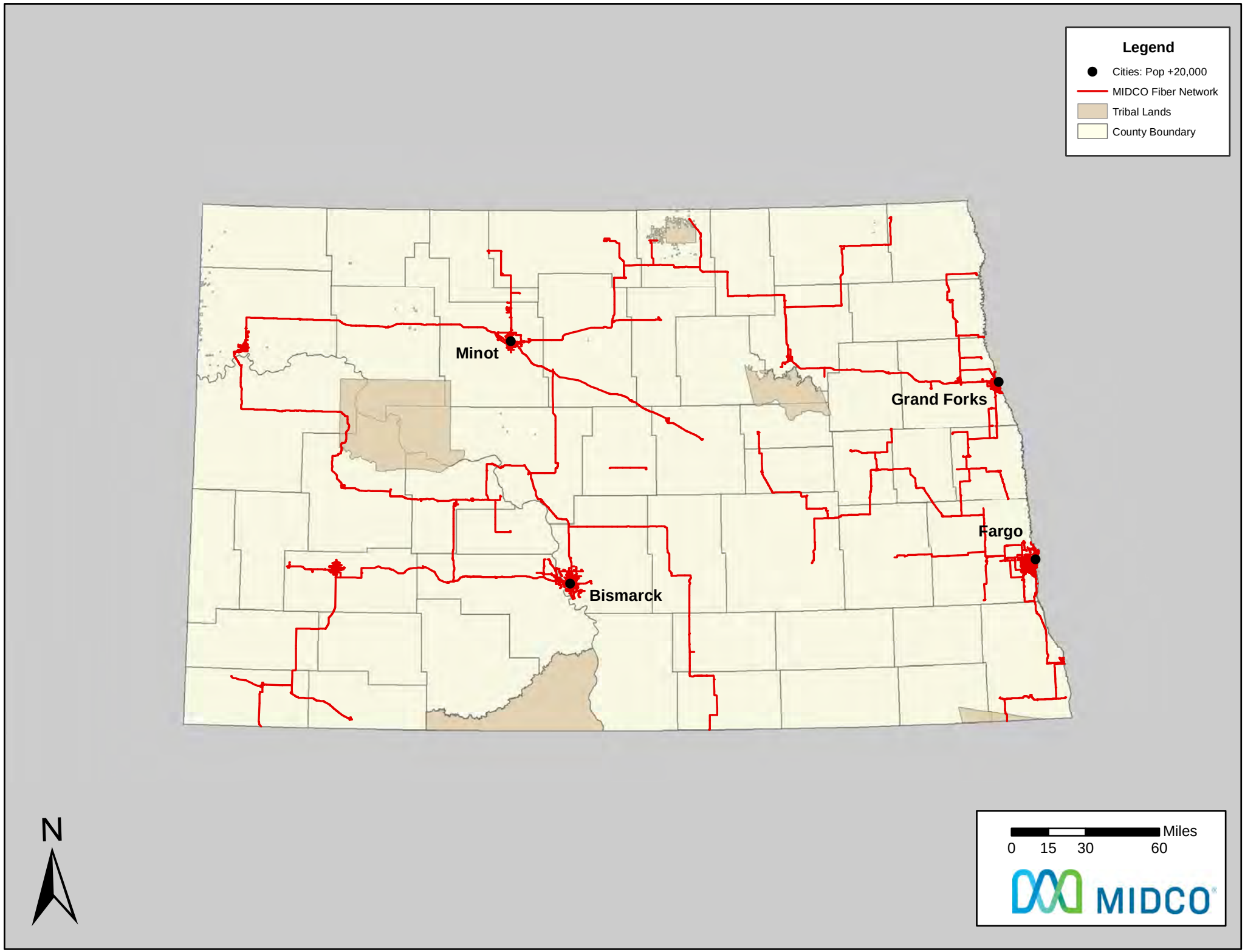
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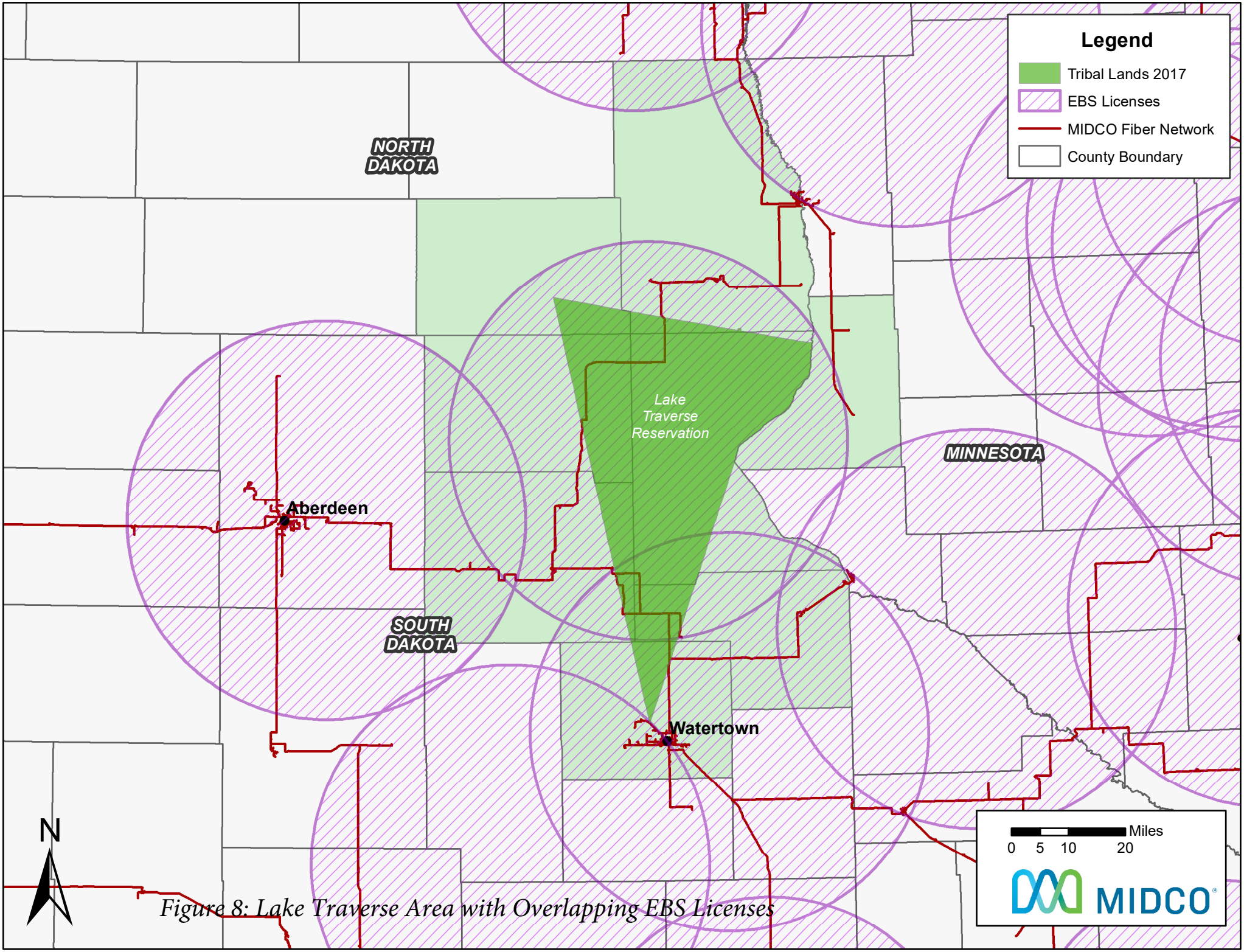

Figure 8: Lake Traverse Area with Overlapping EBS Licenses